

I claim:

- 1        1. A surgical knife, comprising:
  - 2            a) a handle;
  - 3            b) a blade having opposing cutting edges and a longitudinal axis, the blade  
4            being attached to the handle; and
  - 5            c) a distal tip on the blade, the distal tip having a distal point,  
6            wherein the distal tip has a shape generally described by the equation

$$w = ad^n$$

8        where

9        w is the distance from the blade's longitudinal axis to the blade's cutting edges

10      a is a constant of proportionality not greater than 0.5

11      n is an exponent approximately between 0.9 and 1.4

12      d is the distance along the blade's longitudinal axis from the extreme distal point of the  
13      blade tip.

1        2. The surgical knife of claim 1 wherein the distal tip has a thickness of  
2        approximately between 0.003 inches and 0.007 inches.

1        3. The surgical knife of claim 1 wherein an angle between the cutting edges is  
2        between approximately 12° and 20°.

1        4. The surgical knife of claim 1 wherein the distal point is slightly rounded,  
2        with a radius of less than approximately 40 microns.

1        5. The surgical knife of claim 4 wherein the radius is between approximately  
2        10 microns and 40 microns.

1        6. The surgical knife of claim 1 wherein the blade contains a lubricious or  
2        friction reducing coating.

7. A surgical knife, comprising:

  - a) a handle;
  - b) a blade having opposing cutting edges and a longitudinal axis, the blade being attached to the handle and containing a lubricious or friction reducing coating; and
  - c) a distal tip on the blade, the distal tip having a slightly rounded distal point, wherein the distal tip has a shape generally described by the equation

$$w = ad^n$$

where

w is the distance from the blade's longitudinal axis to the blade's cutting edges

a is a constant of proportionality not greater than 0.5

$n$  is an exponent approximately between 0.9 and 1.4

$d$  is the distance along the blade's longitudinal axis from the extreme distal point of the blade tip.

8. The surgical knife of claim 7 wherein the distal tip has a thickness of approximately between 0.003 inches and 0.007 inches.

9. The surgical knife of claim 7 wherein an angle between the cutting edges is between approximately  $12^\circ$  and  $20^\circ$ .

10. The surgical knife of claim 7 wherein the distal point has a radius of less than approximately 40 microns.

11. The surgical knife of claim 10 wherein the radius is between approximately 10 microns and 40 microns.